

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A method of determining total urokinase concentration in a sample containing either or both active and inactive forms of urokinase, comprising:

obtaining at least one peptide comprised of:

a first peptide corresponding to a sequence in Seq. ID No. 16 between amino acid residues 1 and 135,[[;]]

obtaining a second peptide corresponding to a sequence in Seq. ID No. 16 between amino acid residues 159 and 411,[[;]]

obtaining a third peptide corresponding to a sequence in Seq. ID No. 16 which includes amino acid residues 158 and 159, or

any combination;

obtaining ~~an~~ at least one immunological composition directed against each of said at least one peptide[[s]]; and,

contacting aliquots of said sample with each of said at least one immunological composition[[s]]; and,

determining total urokinase concentration in said sample by determining the quantity of each of said at least one immunological composition[[s]] which that is bound to at least one of said forms of urokinase in each of said aliquots.

2. (Currently Amended) The method of claim 1 wherein said first peptide is one as in corresponds to any of Seq. ID Nos. 1-6.

3. (Currently Amended) The method of claim 1 wherein said second peptide is one as in corresponds to any of Seq. ID Nos. 7-12.

4. (Currently Amended) The method of claim 1 wherein said third peptide is one as in corresponds to any of Seq. ID No. 13-14.

5. (Currently Amended) The method of claim 1 wherein each of said at least one immunological composition[[s]] has a binding affinity constant for said at least one peptide from which it is derived directed against that is substantially higher than its binding affinity constant for a non-urokinase protein as similar in amino acid sequence to urokinase as is trypsin.

6. (Currently Amended) The method of claim 1 wherein said third peptide is one as in corresponds to Seq. ID No. 14, and is used to derive wherein said step of obtaining an immunological composition directed against each of said at least one peptide is used to obtain an immunological composition directed against said third peptide corresponding to Seq. ID No. 14, and wherein said immunological composition directed against said third peptide corresponding to Seq. ID No. 14 which exhibits a binding affinity constant for urokinase zymogen, an inactive form of urokinase, of at least $1 \times 10^8 \text{ M}^{-1}[[,]]$ and a binding affinity constant for forms of urokinase lacking a peptide bond between amino acid residues 158 and 159 of Seq. ID No. 16 of at least approximately 10-fold lower than that for urokinase zymogen.

7. (Currently Amended) The method of claim 1 wherein an additional said at least one peptide is further comprised of a fourth peptide corresponding to a sequence in Seq. ID No. 16 which includes amino acid residues 135 and 136 is obtained and used to derive said immunological composition.

8. (Currently Amended) The method of claim 7 wherein said additional wherein said fourth peptide is that of corresponds to Seq. ID No. 17.

9. (Currently Amended) The method of claim 1 wherein the said at least one immunological composition is an antiserum, an antibody, a hybridoma, or a supernatant of a hybridoma, or any combination obtained via injection into a mammal of said at least one peptide.

10. (Currently Amended) The method of claim 1 wherein said determination of said quantity of each of said at least one immunological composition[[s]] is carried out by radiolabeling said sample or said at least one immunological composition.

11. (Currently Amended) The method of claim 1 wherein said determination determining total urokinase concentration in said sample by determining said of said quantity of each of said at least one immunological composition[[s]] that is bound to at least one of said forms of urokinase in each of said aliquot is carried out by comprised of the following steps:

determining the amount of low molecular weight urokinase in said sample which binds to one or more of said at least one immunological composition[[s]] directed against said second peptide corresponding to a sequence in Seq. ID No. 16 between amino acid residues 159 and 411, but which does not bind to one or more of said at least one immunological composition[[s]]

directed against said first peptide corresponding to a sequence in Seq. ID No. 16 between amino acid residues 1 and 135,[[;]]

determining the amount of high molecular weight urokinase in said sample which binds to one or more of said at least one immunological composition[[s]] directed against said first or second peptide corresponding to a sequence in Seq. ID No. 16 between amino acid residues 1 and 135 or between amino acid residues 159 and 411, respectively, but which does not bind to one or more of said at least one immunological composition[[s]] directed against said third peptide corresponding to a sequence in Seq. ID No. 16 which includes amino acid residues 158 and 159; and,

determining the amount of urokinase zymogen, an inactive form of urokinase, in said sample which binds to one or more of said at least one immunological composition[[s]] directed against said third peptide corresponding to a sequence in Seq. ID No. 16 which includes amino acid residues 158 and 159, or

any combination.

12. (Currently Amended) The method of claim 1 wherein said at least one peptide is further comprised of a fourth peptide corresponding to Seq. ID No. 17 and wherein said determination determining total urokinase concentration in said sample by determining said ef-said quantity of each of said at least one immunological composition[[s]] that is bound to at least one of said forms of urokinase in each of said aliquot is carried out by comprised of the following steps:

determining the amount of low molecular weight urokinase in said sample which binds to one or more of said at least one immunological composition[[s]] directed against said second peptide corresponding to a sequence in Seq. ID No. 16 between amino acid residues 159 and 411,

but which does not bind to one or more of said at least one immunological composition[[s]] directed against a said fourth peptide corresponding to Seq. ID No. 17,[[;]]

determining the amount of high molecular weight urokinase in said sample which binds to one or more of said at least one immunological composition[[s]] directed against said first or second peptide corresponding to a sequence in Seq. ID No. 16 between amino acid residues 1 and 135 or between amino acid residues 159 and 411, respectively, but which does not bind to one or more of said at least one immunological composition[[s]] directed against said third peptide corresponding to a sequence in Seq. ID No. 16 which includes amino acid residues 158 and 159, and,

determining the amount of urokinase zymogen, an inactive form of urokinase, in said sample which binds to one or more of said at least one immunological composition[[s]] directed against said third peptide corresponding to a sequence in Seq. ID No. 16 which includes amino acid residues 158 and 159, or

any combination.

13. (Currently Amended) A method of determining total urokinase concentration in a sample containing either or both active and inactive forms of urokinase, comprising:

obtaining at least one peptide comprising:

a first peptide as in any of identical to a predetermined sequence in Seq. ID No.s. 1-6 16 between amino acid residues 1 and 135,[[;]]

obtaining a second peptide as in any of identical to a predetermined sequence in Seq. ID No.s. 7-12 16 between amino acid residues 159 and 411,[[;]]

obtaining a third peptide as in any of identical to a predetermined sequence in Seq. ID No. 13-14 16 which includes amino acid residues 158 and 159, or

any combination;

obtaining ~~an~~ at least one immunological composition selected from the group of immunological compositions consisting of an antisera, an antibody, ~~a hybridoma, or~~ and a supernatant of a hybridoma, said at least one immunological composition[[s]] each obtained via injection into a mammal of said at least one peptide;

contacting aliquots of said sample with each of said at least one immunological composition[[s]]; and,

determining the total urokinase concentration by determining said quantity of each of said at least one immunological composition[[s]] which that is bound to at least one of said forms of urokinase in each of said aliquots, wherein said determination of the quantity of each of said immunological compositions is carried out by comprising the following steps:

determining the amount of low molecular weight urokinase in said sample which binds to one or more of said at least one immunological composition[[s]] directed against said second peptide corresponding identical to a sequence in any of Seq. ID Nos. 16 7-12 between amino acid residues 159 and 411, but which does not bind to one or more of said at least one immunological composition[[s]] directed against said first peptide corresponding identical to a sequence in any of Seq. ID Nos. 16 1-6 between amino acid residues 1 and 135[[;]],

determining the amount of high molecular weight urokinase in said sample which binds to one or more of said at least one immunological composition[[s]] directed against said first or second peptide corresponding identical to a sequence in any of Seq. ID Nos. 16 1-6 between amino acid residues 1 and 135 or Seq. ID Nos. 7-12 between amino acid residues 159 and 411, respectively, but which does not bind to one or more of said at least one immunological composition[[s]] directed against said third peptide corresponding identical to a sequence in Seq. ID Nos. 16 13 or 14 which includes amino acid residues 158 and 159[.], and,

determining the amount of urokinase zymogen, an inactive form of urokinase, in said sample which binds to one or more of said at least one immunological composition[[s]] directed against said third peptide corresponding identical to a sequence in Seq. ID Nos. 16 13 or 14 which includes amino acid residues 158 and 159, or

any combination.

14. (Currently Amended) A kit for determining total urokinase concentration in a sample containing either or both active and inactive forms of urokinase, comprising:

at least one immunological compositions, selected from the group of immunological compositions consisting of an antisera, an antibody, a hybridoma, or a supernatant of a hybridoma; wherein said at least one immunological composition[[s]] is each obtained via injection into a mammal of a at least one peptide, directed against each of a set of peptides including wherein each of said at least one immunological composition is directed against one or more of said at least one peptide, and wherein said at least one peptide is comprised of:

a first peptide corresponding identical to a predetermined sequence in Seq. ID No. 16 between amino acid residues 1 and 135,

a second peptide corresponding identical to a predetermined sequence in Seq. ID No. 16 between amino acid residues 159 and 411, and

a third peptide corresponding identical to a predetermined sequence in Seq. ID No. 16 which includes amino acid residues 158 and 159, or

any combination; and,

instructions for contacting aliquots of said sample with each of said at least one immunological composition[[s,]] and determining total urokinase concentration in said sample by determining the quantity of each of said at least one immunological composition[[s]] which is bound to at least one of said forms of urokinase in each of said aliquots.

15. (Currently Amended) The kit of claim 14 wherein said first peptide is one as in identical to any of Seq. ID Nos. 1-6.

16. (Currently Amended) The kit of claim 14 wherein said second peptide is one as in identical to any of Seq. ID Nos. 7-12.

17. (Currently Amended) The kit of claim 14 wherein said third peptide is one as in identical to any of Seq. ID No. 13-[[14]]15.

18. (Cancelled)

19. (Currently Amended) The kit of claim 18 14 wherein said additional at least one peptide is further comprised of a fourth peptide identical to comprises Seq. ID No. 17.

20. (Currently Amended) The kit of claim 14 wherein the said at least one immunological composition is an antiserum, an antibody, a hybridoma, or a supernatant of a hybridoma, or any combination obtained via injection into a mammal of said peptide.

21. (Currently Amended) A kit for determining total urokinase concentration in a sample containing either or both of active and inactive forms of urokinase, comprising:

immunological compositions directed against each of a set of at least one peptide[[s]] including wherein said at least one peptide is comprised of:

a first peptide as in corresponding to any of Seq. ID Nos. 1-6 a predetermined sequence in Seq. ID No. 16 between amino acid residues 1 and 135,

a second peptide as in corresponding to any of Seq. ID Nos. 7-12 a predetermined sequence in Seq. ID No. 16 between amino acid residues 159 and 411, and

a third peptide as in corresponding to any of Seq. ID Nos. 13-14 a predetermined sequence in Seq. ID No. 16 which includes amino acid residues 158 and 159, or

any combination; and,

instructions for contacting separate aliquots of said sample with each of said immunological compositions[[,]] and determining total urokinase concentration in said sample by determining the

quantity of each of said immunological compositions which is bound to at least one of said forms of urokinase in each of said aliquots, wherein said instructions direct the user to comprise:

determine determining the amount of low molecular weight urokinase in said sample which binds to one or more of said immunological compositions directed against said second peptide corresponding to a predetermined sequence in Seq. ID No. 16 between amino acid residues 159 and 411, but which does not bind to one or more of said immunological compositions directed against said first peptide corresponding to a predetermined sequence in Seq. ID No. 16 between amino acid residues 1 and 135[;],

determine determining the amount of high molecular weight urokinase in said sample which binds to one or more of said immunological compositions directed against said first or second peptide corresponding to a predetermined sequence in Seq. ID No. 16 between amino acid residues 1 and 135 or between amino acid residues 159 and 411, respectively, but which does not bind to one or more of said immunological compositions directed against said third peptide corresponding to a predetermined sequence in Seq. ID No. 16 which includes amino acid residues 158 and 159[;]and,

determine determining the amount of urokinase zymogen, an inactive form of urokinase, in said sample which binds to one or more of said immunological compositions directed against said third peptide corresponding to a predetermined sequence in Seq. ID No. 16 which includes amino acid residues 158 and 159,or

any combination.

22. (Withdrawn) A peptide for determining total urokinase concentration in a sample as in any of Seq. ID Nos. 1-15 and 17.

23. (Withdrawn) An antisera obtained via injection into a mammal of a peptide for determining total urokinase concentration in a sample as in any of Seq. ID Nos. 1-15 and 17.
24. (Withdrawn) An antibody obtained via injection into a mammal of a peptide for determining total urokinase concentration in a sample as in any of Seq. ID Nos. 1-15 and 17.
25. (Withdrawn) A hybridoma producing an antibody obtained via injection into a mammal of a peptide for determining total urokinase concentration in a sample as in any of Seq. ID Nos. 1-15 and 17.
26. (Withdrawn) A supernatant of a hybridoma producing an antibody obtained via injection into a mammal of a peptide for determining total urokinase concentration in a sample as in any of Seq. ID Nos. 1-15 and 17.